

REMARKS

Claims 1-6 remain pending in the present application. The Examiner objected to claims 3 and 6, indicating that they would be allowable if rewritten in independent form to include all of the limitations of their base claim and any intervening claims. No amendments have been made in the pending claims, however, since Applicants believe that the claims overcome the art of record, as they stand. Applicants appreciate the Examiner's review of the Application.

The § 102 Rejections

The Examiner rejected claims 1 and 4 under 35 USC 102(b) as being anticipated by U.S. Patent no. 3,617,865, issued to Hakata (hereinafter Hakata). Applicants respectfully traverse at least for the reasons given below.

Initially considering claim 1, this claim recites using a locator to sense a first locating signal strength at a first operator determined distance generally in vertical alignment with an overhead surface position which is overhead of a cable. The first operator determined distance is measured from the overhead surface position. The locator is then moved to a second operator determined distance from the overhead surface position generally in vertical alignment with the overhead surface position. A second locating signal strength is sensed at the second operator determined distance. The second operator determined distance is determined from the overhead surface position. The depth of the cable is then determined using the first and second signal strengths and the first and second operator determined distances. It is important to understand in this regard that only first and second signal strengths are needed, as measured at the first and second operator determined distances, respectively.

The Hakata technique is considerably more complex and relies on establishing two field gradients, as described in col. 2, lns. 60-69 of the patent. Establishing these two field gradients actually requires the use of two field strength measurements for each gradient, using two coils that are positionally fixed or spaced apart relative to one another and moved between the first and second predetermined levels (illustrated by figure 1) or using four coils such that two pairs of coils are formed, each of which coils in a pair is positionally fixed relative to the other coil of that pair and one coil pair is located at each of the predetermined levels (as illustrated by figures 2 and 3 of the patent). Accordingly, the method disclosed by Hakata requires four field strength measurements in order to obtain the cable depth. Applicants' technique, in contrast, requires the use of only two field signal strength measurements that can be obtained using a single coil. Hakata further illustrates a somewhat bulky and cumbersome appearing implementation, for example, in figures 7 and 8 of the patent whereby two coils in a fixed relative positional relationship are slidably received on a post for movement between the illustrated predetermined levels for purposes of obtaining the four signal strength requirements that are needed. The use of a single antenna, in Applicants' technique, advantageously provides for the use of a more compact locator in the execution of this method, for example, as described in paragraph 73 of Applicants' specification.

As a further distinction, it should be appreciated that Hakata requires placing his antenna array at first and second *predetermined* levels, as described at col. 2, lns. 60-63, and later denominated as h and $h + h$, where h represents the distance between the two levels (see col. 5, lns. 74-75). Further, the distance between the coils in the Hakata apparatus is fixed and is no way operator determinable. Applicants' technique is not constrained by the use of predetermined levels or fixed apparatus geometry, but advantageously uses arbitrary operator determined distances. The use of such operator

DCI-21D1

3 of 4

USSN 10/808,918

determined distances is considered to be significantly more convenient than the predetermined levels and associated apparatus having fixed coil positions, as adopted by Hakata.

In view of the foregoing, it is submitted that Hakata fails to teach disclose or reasonably suggest the use of signal strength measurements in the manner that is embraced by the limitations of claim 1. Further, Hakata fails to teach disclose or reasonably suggest the use of operator determined distances, as set forth by claim 1. Accordingly, for at least these reasons, allowance of claim 1 is respectfully requested.

Claim 4 is an independent claim which reflects the limitations of claim 1, but in method form. Accordingly, Applicant considers that the arguments made above, in favor of the patentability of claim 1 of the art of record, are equally applicable with respect to the patentability of claim 4. Hence, for at least these reasons, allowance of claim 4 is respectfully requested.

The § 103 Rejections

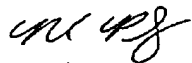
The Examiner rejected claims 2 and 5 under 35 U.S.C. § 103(a) as being unpatentable over Hakata in view of U.S. Patent no. 6,496,008 issued to Brune et al (hereinafter Brune). Applicants respectfully traverse at least for the reasons given below.

Initially, it is noted that the Brune patent appears to contribute nothing to the grounds of rejection of claims 1 and 4 under § 102 over Hakata, in any reasonable combination therewith. Accordingly, it is respectfully submitted that each of claims 2 and 5 is also patentable over the art of record for at least the reasons set forth above with respect to claims 1 and 4, respectfully. Further, each of these dependent claims places additional limitations on its parent and intermediate claims which, when considered in light of their limitations, further distinguish the claimed invention from the art of record.

Applicants note that the present application is a divisional case, the parent of which is U.S. Patent no. 6,737,867 having a filing date of August 22, 2001 and an issue date of May 18, 2004. The Brune patent has a filing date of August 17, 2000 and an issue date of December 17, 2002. Hence, Applicants believe that the Brune reference is being asserted as prior art to the present application under § 102(e)(2). In this regard, it is noted that the Brune patent further includes the same inventorship as the present application. For a reference to qualify as prior art under § 102(e)(2) it must be based on an application for patent "by another." Accordingly, it is believed that the Brune patent does not qualify as prior art and should be removed as a reference under this section.

For the foregoing reasons, it is respectfully submitted that all of the Examiner's objections have been overcome and that the application is in condition for allowance. Hence, allowance of these claims and passage to issue of the application are solicited. If the Examiner has any questions concerning this case, the Examiner is respectfully requested to contact Mike Pritzkau at 303-410-9254.

Respectfully submitted,



Michael M. Pritzkau
Reg. No. 37,913

DCI-21D1

4 of 4

USSN 10/808,918